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Immunizing Values of Toxoid and Toxin-antitoxin Various Antirabic Vaccines and Vaccine Paralysis

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HUGH S. CUMMING, *Surgeon General*

DIVISION OF SANITARY REPORTS AND STATISTICS

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They contain: (1) Current information of the prevalence and geographic distribution of preventable diseases in the United States in so far as data are obtainable, and of cholera, plague, smallpox, typhus fever, yellow fever, and other communicable diseases throughout the world. (2) Articles relating to the cause, prevention, or control of disease. (3) Other pertinent information regarding sanitation and the conservation of public health.

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PUBLIC HEALTH REPORTS

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THE IMMUNIZING VALUE OF DIPHTHERIA TOXIN-ANTITOXIN MIXTURE AND OF DIPHTHERIA TOXOID[1]

By W. T. HARRISON, *Surgeon, United States Public Health Service, National Institute of Health (formerly Hygienic Laboratory), Washington, D. C.*

The value of diphtheria toxin-antitoxin mixture in rendering susceptible individuals insusceptible to diphtheria has become so well grounded in public-health practice as to require no comment.

Following the introduction by Ramon of diphtheria toxoid (anatoxine), this product has come more widely into use, and it would seem advisable to compare its activity in human beings with the older product whenever the opportunity offers. It is generally accepted that toxoid is more effective in immunizing laboratory animals, and the claim has been made that the immunity in children following its use appears earlier than that following the use of toxin-antitoxin mixture.

In the course of work at the Hygienic Laboratory, now the National Institute of Health, in an attempt to develop an official antigenic test for toxin-antitoxin mixture, an opportunity was presented to observe the results following the use of the two products in comparable groups of school children. In the two groups of white children used for comparison, all were Schick-tested before immunization and again after the stated interval following the last immunizing injection. The toxin used for these tests had been kept at 5° C. for three years following preparation, and the M. L. D. was accurately determined before beginning the work. Dilutions were always made on the morning of the tests, and all diluted toxin was used before noon of the same day. The Schick dose was 1/50 M. L. D. in a volume of 0.1 c. c. The test in children who received toxin-antitoxin mixture was controlled with heated toxin, and in those who received toxoid by toxoid diluted 1 in 20 with physiological salt solution. Readings were made on the third or fourth day, and all children who gave a positive reaction to the toxoid control were immunized with toxin-antitoxin mixture.

[1] Presented at the Forty-Fifth Annual Conference of State and Provincial Health Authorities of North America, Washington, D. C., June 20, 1930 (held jointly with the Twenty-eighth Annual Conference of State and Territorial Health Officers with the United States Public Health Service).

The toxin-antitoxin mixtures used contained 0.1 L+ dose of toxin per cubic centimeter and were from (1) routine samples submitted by the manufacturers for test prior to release for distribution, (2) special lots furnished by the manufacturers for use in this work, and (3) one special lot prepared at the National Institute of Health. All lots were carefully tested for toxicity in guinea pigs and fell within the range which is considered proper for this product. All were kept in the cold room at 5° to 10° C. until used. It is believed that the mixtures used in these children may be considered at least equal to the product available in the open market, since storage conditions following preparation were ideal.

The toxoid was furnished by five manufacturers, upon request, in the same manner as were furnished the special lots of toxin-antitoxin mixture. All lots of both products may be taken as routine samples from the various producers, no effort having been made to select highly antigenic lots of either.

The ages of the children ranged from 1 to 16 years, a few preschool children being brought to the school buildings by the parents to receive the injections. These children are included among the 5-year olds.

Table 1 shows the results, by manufacturer and lot number, from three doses of toxin-antitoxin mixture, 1 c. c. each at 7-day intervals in 362 Schick-positive white children. The column headed "Interval (days)" gives the time elapsing between the last dose of toxin-antitoxin mixture and the post-Schick tests. The great variation in antigenic efficiency of different lots is readily seen; 64 per cent of the entire number were rendered Schick negative.

Table 3 shows the results from immunization with diphtheria toxoid in 476 Schick-positive white children. The product from manufacturer "V" was given in three doses of 0.5, 0.5, and 1.0 c. c. each, at intervals of seven days, the interval for toxin-antitoxin doses. The toxoids from "W," "X," and "Y" were given in two doses of 1 c. c. each at a 31-day interval. The toxoid of manufacturer "Z" was given in two doses of 1 c. c. each, with a 42-day interval, the additional 11 days being due to a fire occurring in the school. For this reason the interval between the last immunizing dose and the post-Schick test was reduced to 90 days. It is seen from this table that the poorest results from toxoid were better than the best from toxin-antitoxin mixture; 95 per cent of the entire number were rendered Schick-negative. The L. F. value per c. c.—that is, the number of units of antitoxin required to flocculate 1 c. c. of toxoid—is shown in the last column of Table 3.

The negro children who received three doses of toxin-antitoxin mixture have not been used in comparing the results obtained from the two products; but since the figures are available, they are given for their general interest and to compare them with white children

receiving the same product. In the negro children the preliminary Schick test was done with a check-tested, commercial product. The human dose was 1/50 M. L. D. in a volume of 0.1 c. c. The post-Schick test was done with the same National Institute of Health toxin, which was used in the white children. The results by manufacturer and lot number are shown in Table 2. In 387 Schick-positive negro children 68 per cent were rendered Schick-negative. Results of preliminary and post-Schick tests by ages are shown in the last four columns of Table 4.

Table 4 was prepared to show the per cent of susceptibles in the different age groups and the per cent of susceptibles of different ages rendered immune by toxin-antitoxin mixture or toxoid. The small numbers of children above 14 years are omitted as not affecting the final figures. The preliminary Schick test in the white children who received toxin-antitoxin mixture gave 75 per cent positive reactions while those who received toxoid showed 61 per cent positive to the preliminary test. The toxoid group contained a larger proportion of older children than the toxin-antitoxin mixture groups; and, when this difference in ages is adjusted by rearranging the figures for the toxoid group to give the same age distribution as in the toxin-antitoxin mixture group, 6 of the 15 per cent difference disappears, leaving 76 per cent susceptible in the group which received toxin-antitoxin mixture and 67 per cent corrected for the groups which received toxoid. Correcting for the difference in ages in the two groups for the post-Schick test, the percentage of negative reactors in those who received toxoid is slightly increased (95.8 per cent).

The differences in the economic status of the two groups of children were so slight as to be without influence upon susceptibility. A considerable number stated that they had already been immunized either in other schools or by the family physician; but no attempt was made to take these reports into account, since with no effort toward selection this factor should tend to equalize itself in the two groups.

The superiority of toxoid over toxin-antitoxin mixture in these two groups of children as measured by the Schick test is very apparent, 95 per cent rendered Schick negative by the former as compared with 64 per cent by the latter.

Twenty-seven children (4 per cent) tested with diluted toxoid as a control to the Schick test reacted positively to the control; three of these were younger than 8 years. In order to avoid the possibility of reaction due to sensitivity to the products of the diphtheria bacillus, these 27 children were immunized with toxin-antitoxin mixture. Among the 476 children receiving toxoid, no local or general reactions were reported. Careful inquiry was made of the school authorities but no disturbance following a dose of toxoid was sufficiently definite to be recalled at the next visit.

For immunizing young children, including 6-year olds, without preliminary Schick-testing, and older children who react negatively to a diluted toxoid control of the Schick test, diphtheria toxoid seems to be practically an ideal agent both on account of the complete absence of local or general reactions and the very high percentage of successful immunizations following two injections.

The usual toxin reactions were observed in children receiving toxin-antitoxin mixture, consisting of swelling and redness, but not severe enough in any case to require special attention.

Acknowledgments.—The writer's appreciation is due Surgs. M. V. Veldee and L. M. Rogers for assistance in performing certain post-Schick tests, and to Laboratory Assistant B. T. Sockrider for technical assistance during the entire study. Dr. W. C. Fowler, health officer for the District of Columbia, kindly permitted the work to be done in the District schools and detailed to the work Miss Katherine Douglass, public health nurse, whose assistance was most valuable.

CONCLUSIONS

1. In 475 school children diphtheria toxoid gave an immunity response, as measured by the Schick test, of 95 per cent as compared with 64 per cent in 355 children receiving 0.1 L+dose toxin-antitoxin mixture.

2. No local or general reactions were reported in children receiving toxoid; those giving reactions to intracutaneous test injections of diluted toxoid having been removed from the group.

3. Two doses of 1.0 c. c. each, with an interval of one month, produced a negative Schick reaction in a high percentage of subjects.

(Tables 1–4 follow)

TABLE 1.—*The preliminary Schick reaction in a group of white children of both sexes and ranging in age from 1 to 16 years; and the changes produced in the positive reactors by the injection, at weekly intervals, for three doses, of 1.0 c. c. 0.1 L+diphtheria toxin-antitoxin mixture*

Manufacturer	Lot No.	Preliminary Schick test		Interval (days)	Post-Schick test	
		Number of children	Per cent positive		Number of children	Per cent negative
C	2	39	74	122	16	69
	3	46	74	122	19	68
	4	60	80	123	20	65
	7	142	79	179	79	61
D	4	160	79	203	82	73
E	3	115	66	178	43	35
G	1	51	80	122	20	66
I	1	47	77	123	15	67
L	1	110	77	133	59	73
Total		770	76		362	64

TABLE 2.—*The preliminary Schick reaction in a group of negro children of both sexes and ranging in age from 1 to 16 years; and the changes produced in the positive reactors by the injection, at weekly intervals, for three doses, of 1.0 c. c. 0.1 L+diphtheria toxin-antitoxin mixture*

Manufacturer	Lot No.	Preliminary Schick test		Interval (days)	Post-Schick test	
		Number of children	Per cent positive		Number of children	Per cent negative
A	1	23	78	123	8	25
B	1	56	84	123	20	70
	2	36	75	122	16	63
	3	74	78	123	12	83
	4	52	85	123	16	88
C	1	73	73	123	22	41
	5	68	65	123	15	67
	6	47	79	107	11	82
D	1	51	76	123	18	44
	2	171	62	103	53	68
	3	158	75	103	60	73
E	1	33	76	122	13	62
	2	32	66	123	8	63
	3	129	62	195	57	75
F	1	35	63	122	9	56
H	1	67	75	123	10	60
I	2	29	90	123	11	82
J	1	15	73	123	7	71
K	1	59	66	107	12	83
L	1	30	57	133	9	89
Total		1,238	71		387	68

TABLE 3.—*The preliminary Schick reaction in a group of white children of both sexes and ranging in age from 1 to 16 years; and the changes produced in the positive reactors by the injection of diphtheria toxoid*

Manufacturer	Lot No.	Preliminary Schick test		Interval (days)	Post Schick test		L. F. per c. c.
		Number of children	Per cent positive		Number of children	Per cent negative	
V [1]	1	225	61	133	86	92	11
W [2]	1	143	70	119	72	92	0
X [2]	1	323	58	119	128	95	8
Y [2]	1	267	61	119	118	96	4
Z [3]	1	170	55	90	72	99	4
Total		1,128	61		476	95	

[1] Immunizing doses 0.5, 0.5, and 1.0 c. c., 7-day intervals.
[2] Immunizing doses 1.0 and 1.0 c. c., 31-day interval.
[3] Immunizing doses 1.0 and 1.0 c. c., 42-day interval.

TABLE 4.—*The age distribution of the white and negro children receiving the preliminary and the post-Schick test, the per cent positive on preliminary test and the per cent rendered negative by immunization with toxin-antitoxin mixture or toxoid*

Age groups	White children								Negro children			
	Preliminary Schick test				Post-Schick test				Preliminary Schick test		Post-Schick test	
	Toxin-antitoxin mixture		Toxoid		Toxin-antitoxin mixture		Toxoid		Toxin-antitoxin mixture		Toxin-antitoxin mixture	
	Number tested	Per cent positive	Number tested	Per cent positive	Number tested	Per cent negative	Number tested	Per cent negative	Number tested	Per cent positive	Number tested	Per cent negative
5 and under	87	90	52	92	35	63	21	100	106	85	27	81
6	135	85	138	81	67	73	75	88	219	87	77	75
7	112	84	157	73	63	62	73	95	237	77	72	64
8	91	74	133	65	42	59	65	97	221	73	89	62
9	91	74	137	59	48	58	61	95	138	62	38	63
10	69	72	150	49	35	60	56	96	105	59	32	72
11	51	67	125	53	23	69	46	100	84	57	20	75
12	44	61	111	54	18	61	47	94	58	48	12	91
13	44	68	57	39	19	63	18	100	42	59	14	57
14	22	41	49	35	5	60	13	100	18	44	5	40
Total	746	76	1,109	61	355	64	475	95	1,228	72	386	68

ANTIRABIC VACCINE PARALYSIS

CONSIDERATION OF VARIOUS VACCINES[1]

By G. W. McCoy, *Director, National Institute of Health (formerly Hygienic Laboratory), United States Public Health Service*

More or less serious paralytic manifestations following antirabic vaccinations have been recognized since the earliest experience with the method, even during the days of Pasteur.

While the occurrence of paralysis during the course of, or following, antirabic treatments is not common, it occurs often enough to constitute a factor that must be weighed when we are considering the question of advising treatment. In connection with most biologic agents used as prophylactics, the question of the hazard due to, or associated with, the prophylactic agent itself must be kept in mind; for example, only last winter, through the courtesy of Surg. J. P. Leake, of the Public Health Service, I saw a practically complete paraplegia due to the use of tetanus antitoxin as a prophylactic. We must recognize and remember that acute anaphylactic shock is not the only unpleasant sequel of some of our prophylactic agents of a biologic nature.

The essential cause of the paralysis that develops in connection with antirabic treatment is not known. Usually it is regarded either

[1] Presented at the Twenty-eight Annual Conference of the State and Territorial Health Officers with the United States Public Health Service, Washington, D. C., June 18, 1930 (held jointly with the Forty-fifth Annual Conference of State and Provincial Health Authorities of North America).

as a modified form of rabies (street virus), as a manifestation of the action of fixed rabies virus; or as a toxic, or an anaphylactic, action due to the introduction of a foreign protein, in this case the central nervous system of the rabbit. In discussing this subject in 1913, Surgeon Hasseltine (Public Health Reports, October 24, 1913) gave the following as the chief theories of causation:

(*a*) That it is due to anaphylaxis resulting from the injection of foreign animal tissue (rabbits' cord);

(*b*) That it is due to a "toxin" elaborated by the specific organism of rabies;

(*c*) That it is due to rabies resulting from street virus received at the time the bite was inflicted;

(*d*) That it is due to rabies resulting from fixed-virus infection;

(*e*) That it is due to infection with extraneous organisms introduced with the virus during treatment; and

(*f*) That it is due to hysteria and other neuro-psychologic disorders.

Perhaps at the present time one would like to add the suggestion that the antirabic vaccines may activate a virus lying dormant in the body, or may serve to enhance susceptibility to an ordinarily nonpathogenic virus. Another thought that will occur to one familiar with the frequency of pathological processes in the central nervous system of rabbits is the possibility of the occasional susceptibility of man for a virus normally, or perhaps we had better say, commonly, found in rabbits.

As predisposing causes there are mentioned alcoholism, overexertion, and exposure; but one doubts the essential importance of any of these.

There are some interesting features in connection with the clinical aspects to which I wish to refer briefly. The complications nearly always affect adults. The time of onset varies, from as early as the sixth day from the inauguration of the treatment to as late as the twentieth, exceptionally even longer. The onset may be with general symptoms—vomiting, lumbar pains, chilliness, and fever—certainly suggestive of an infectious process. The paralysis of a muscle or group of muscles is often preceded by sensory symptoms such as pain, numbness, or tingling. The extent of paralysis varies from a single muscle or group, as the facial muscles, to a complete paraplegia with ascending paralysis that ends in death in a few days through failure of respiration. Termination may be by death, which is unusual though not rare, by complete recovery in the course of a few weeks or a few months, or by partial recovery. Death may be due to respiratory paralysis, to bed sores, or to cystitis.

Fielder (Jour. A. M. A., June 31, 1916, vol. 66) puts the reported death rate as 16.2 per cent, but points out that probably this is too high, as severe and fatal cases are those most likely to be reported.

When we inquire as to its frequency, we find a most bewildering variation in figures from different institutes and from different countries. Thus in figures recently collected from Italy by the health committee of the League of Nations we find a report of 34 cases among 18,502 persons treated—1 in each 574; while from Russia there were 32 cases among 176,455—1 in each 5,514. In other words, the condition is about 10 times as frequent in the Italian experience as in the Russian, and this difference is by no means an isolated example.

A few years ago we collected data from a number of producing establishments in the United States and learned of but 3 cases of paralysis among about 20,000 treatments.

In our experience in the Hygienic Laboratory there were, during the nearly 13 years in which we produced antirabic vaccine, 4 known cases among over 1,800 persons treated.

When this subject was assigned to me for presentation at this time, I collected the data from a number of licensed producers and from several that do not have a Federal license, paying particular attention to the methods of treatment employed in relation to the frequency of paralysis. These figures cover the 15-month period from January 1, 1929, to April 1, 1930; they are presented in the following table:

Type of treatment	Cases treated	Cases of paralysis reported	Ratio	Remarks
Killed virus (Semple method and modifications)	17,645	6	1 : 2,941	4 fatal; 2 partial recovery.
Frozen and desiccated virus (Harris method and modifications).	4,148	2	1 : 2,074	2 recovered.
Living diluted virus (Hoyges method and modifications).	2,593	0	0	
Attenuated virus (Pasteur method)	1,077	0	0	

Clearly these figures fail to give us any clue as to the relative hazard of the several forms of treatment dealt with. Indeed, if any one method of treatment had been proved by experience to have a definitely higher paralysis rate than others, that method would naturally disappear from use, unless it had some very marked advantage from some other point of view. I suspect that the number of cases in the present series is below the number that actually occurred; otherwise it is difficult to reconcile our high incidence of 1 case in about each 450 treated in the Hygienic Laboratory with the failure to secure a report of a single case in the over 1,000 treatments reported in this series. I am further influenced in the suspicion that the number is too low by the high death rate (50 per cent) among those reported here.

What to do when paralysis appears if it develops before the treatment is completed, is a question; one has good authority for either

continuing with the treatment or stopping the inoculations. Generally speaking, the decision should rest on the urgency of treatment from the point of view of the hazard of rabies. So far as I know, there is no particular medicinal treatment for cases of paralysis that have developed.

With the data at hand I regret that we have no grounds for recommending, or discouraging the use of any form of treatment, nor have we any other suggestions as to how these unfortunate cases may be obviated.

CURRENT PREVALENCE OF COMMUNICABLE DISEASES IN THE UNITED STATES [1]

June 15–July 12, 1930

Poliomyelitis.—The infantile paralysis situation in California, to which attention was called in the previous summary,[2] has grown more serious, and the incidence has risen rather sharply in other sections. Poliomyelitis is a warm-weather disease, and a seasonal rise is normally expected beginning in the late spring or early summer; but the current increase in the United States is considerably greater than the expectancy. From June 1 to the date of the latest reports available at this writing (week ended July 19), there were reported an aggregate of 896 cases in the 43 States regularly tabulated. During the corresponding period of 1929 there were but 232 cases reported; in fact, it would be necessary to go back more than seven years to find an equivalent rise at this season.

Slightly more than half of the cases (480) were reported from California; but even if these are deducted from the national total, the reports for the remainder of the country represent an increase of 79 per cent over the figures for the corresponding seven weeks of last year.

An examination of the regional distribution (Table 1) shows that the attack rates are, in all sections except the Atlantic coast, from 3 to 13 times as high as for the corresponding period of last year. The table also shows that the more western groups of States have higher rates than the central and eastern groups.

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[1] From the Office of Statistical Investigations, U. S. Public Health Service. This summary is made up from weekly telegraphic reports received by the Public Health Service from State health departments. These reports are published weekly in tabular form in the section of the Public Health Reports entitled "Prevalence of Disease."

The numbers of States included under the various diseases are as follows: Typhoid fever, 41; poliomyelitis, 43; meningococcus meningitis, 42; smallpox, 42; measles, 38; diphtheria, 42; scarlet fever, 41; influenza, 31.

[2] Public Health Reports, June 20, 1930, p. 1421.

TABLE 1.—*Poliomyelitis case rates, by geographical divisions, June 1 to July 19, 1930, inclusive, and comparative rates for 1929*

Division	1930		1929	
	Cases reported	Rate per 1,000,000 population	Cases reported	Rate per 1,000,000 population
Pacific and Mountain	508	46.5	38	3.5
South Central	185	9.9	44	2.3
West North Central	56	4.2	19	1.4
East North Central	46	2.5	16	.9
New England and Middle Atlantic	65	2.9	68	3.0
South Atlantic	36	3.1	47	4.0
All regions	896	9.4	232	2.4

TABLE 2.—*Poliomyelitis attack rates in States with high rates, June 1 to July 19, 1930, inclusive, and comparative rates for 1929*

State	1930		1929	
	Cases reported	Cases per 1,000,000 population	Cases reported	Cases per 1,000,000 population
California	480	102.6	29	6.2
Louisiana	110	56.2	0	.0
New Mexico	5	12.5	2	5.0
Oklahoma	30	12.2	1	.4
North Carolina	33	11.1	35	11.7
Arizona	5	10.2	1	2.0
Minnesota	28	10.2	6	2.2
Kansas	15	8.1	4	2.2
Indiana	21	6.6	1	.3

Within individual regions, the distribution is markedly uneven. Thus, California furnishes about 95 per cent of the cases in the Pacific and Mountain groups of States; Louisiana furnishes almost as many as all the other Southern States combined; Massachusetts dominates the New England rate, although its attack rate (3.6 per million) is still low in comparison with the Western rates. Table 2 shows individual States reporting the highest rates. In this connection, it should be borne in mind that for a disease as difficult to diagnose in its atypical forms as is poliomyelitis, the case rates are probably very much understated, particularly in those regions where the incidence has not yet become a subject of discussion.

Meningococcus meningitis.—The meningitis incidence showed a decline which was greater than would be expected on seasonal grounds alone. During the 4-week period, 342 cases were reported, as compared with 470 during the preceding period, and with 570 during the corresponding period of last year. During the week ended July 5, there were noticeable flare-ups in three States—New York State, California, and Michigan. Whether this coincidence is due to anything more than chance, it would be difficult to state at this time.

Smallpox.—The incidence of smallpox, though declining seasonally, maintained its excess over the average experience of recent years. Reported cases numbered 2,608, as compared with 1,890 for the corresponding period in 1929, and with 1,748 for the same period in 1928. The highest rates occur in the North Central States (i. e., the Great Lakes region and west thereof), on the Pacific Coast, and in Oklahoma in the South.

Diphtheria.—There was another gratifying decline in diphtheria to a record low level, taking season into consideration. During the 4-week period of this report, 2,911 cases were reported, as compared with 4,522 during the same period last year. During the past five months, every week has established a low diphtheria record in relation to the corresponding period of previous years.

Influenza.—The decline in influenza from the previous 4-week period was somewhat greater than the seasonal expectancy, and the incidence is at a low level in relation to that of recent years. Reported cases numbered 390, compared with 480 for the same period of last year.

Measles.—The incidence of measles was above the average for this season. The reports showed 27,848 cases, as against 20,284 for the same period last year.

Scarlet fever.—The incidence of scarlet fever continues to be the lowest for the season during recent years. There were 5,443 cases reported, as compared with 6,264 for the same period last year.

Typhoid fever.—The recent favorable record for typhoid fever was maintained. The number of reported cases, 1,726, was only slightly above the low record established last year, when 1,682 cases were reported during the corresponding 4-week period.

In recent years there has been a second interesting change in the typhoid fever curve, in that the peak incidence has been occurring earlier in the year than formerly. In 1926, the peak came about the middle of September; in 1927 and 1928, about the third week of August; and in 1929 about the first week of August. This change has apparently resulted because the declines in the case rates have been more pronounced during the late summer than during the earlier months. It will be interesting to note whether this tendency will continue into the present year.

Mortality, all causes.—The mortality rate for large cities, as reported by the Bureau of the Census, was about normal, as compared with previous years. The average weekly rate (annual basis) was 11 per 1,000 inhabitants.

COURT DECISION RELATING TO PUBLIC HEALTH

Milk ordinance held void because in conflict with State statutes.—(Connecticut Supreme Court of Errors; Shelton *v.* City of Shelton et al., 150 A. 811; decided June 2, 1930.) An ordinance of the city of Shelton made it unlawful to sell at retail any milk or cream unless produced from tuberculin-tested cattle or pasteurized. The city charter authorized the city to adopt ordinances "to license milk dealers and to regulate the sale and manner of distribution of milk and to prohibit the sale thereof unless in accordance with such regulations." In the same charter section, in dealing with foodstuffs, the power was given to adopt ordinances "and to prohibit the sale thereof [foodstuffs] when in such condition as to endanger the public health." A State law provided that certain specified statutory provisions should not "affect the authority of any * * * city * * * to enact ordinances or by-laws for the control, regulation, sale or distribution, within its limits, of milk which may be detrimental to public health."

The plaintiff was a registered producer of milk under the State laws and a licensed milk dealer under the ordinances of the defendant city. The milk produced and sold by him had been tested and analyzed periodically and found to be particularly clean and pure and not detrimental to public health in any way. In an action brought by the plaintiff, the question was presented to the supreme court as to whether the city of Shelton had the power to adopt the ordinance providing that milk or cream sold at retail should be produced from tuberculin-tested cattle or be pasteurized. The court examined in detail the State statutes dealing with milk and cream and stated that "The statute law recognizes at least five kinds of milk and makes all five lawful provided the statutory provisions are complied with in their production and sale, viz: Raw milk, tuberculin-tested milk, pasteurized milk, grade A milk, and certified milk." The court said that "The city of Shelton was without power to enact an ordinance prohibiting the sale at retail of any one of these kinds of milk which are authorized by statute," and held that the ordinance conflicted with the statutes of the State and was, for that reason, void.

PREVALENCE OF DISEASE

No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring

UNITED STATES

CURRENT WEEKLY STATE REPORTS

These reports are preliminary, and the figures are subject to change when later returns are received by the State health officers

Reports for Weeks Ended August 2, 1930, and August 3, 1929

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended August 2, 1930, and August 3, 1929

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended Aug. 2, 1930	Week ended Aug. 3, 1929	Week ended Aug. 2, 1930	Week ended Aug. 3, 1929	Week ended Aug. 2, 1930	Week ended Aug. 3, 1929	Week ended Aug. 2, 1930	Week ended Aug. 3, 1929
New England States:								
Maine	5	2	----	----	14	20	0	0
New Hampshire	4	----	----	----	7	13	0	0
Vermont	1	----	----	----	6	5	0	0
Massachusetts	27	54	2	----	94	49	0	4
Rhode Island	2	2	----	----	2	10	0	0
Connecticut	4	12	1	1	10	36	2	0
Middle Atlantic States:								
New York	66	126	[1] 2	[1] 4	291	162	11	17
New Jersey	26	62	2	5	113	29	7	7
Pennsylvania	55	104	----	----	254	179	5	5
East North Central States:								
Ohio	38	18	3	2	55	7	5	4
Indiana	7	15	1	----	8	67	5	0
Illinois	66	91	17	14	18	126	11	12
Michigan	15	88	----	1	60	66	8	45
Wisconsin	10	18	2	16	88	184	4	2
West North Central States:								
Minnesota	11	11	1	----	38	13	2	7
Iowa	----	2	----	----	----	13	0	0
Missouri	13	14	----	----	16	12	5	3
North Dakota	----	8	----	----	1	41	0	1
South Dakota	1	1	----	----	9	5	1	3
Nebraska	7	2	----	----	6	49	0	0
Kansas	6	7	4	----	22	54	1	3
South Atlantic States:								
Delaware	----	----	----	----	3	3	0	0
Maryland [2]	9	15	2	1	11	3	1	0
District of Columbia	4	6	1	----	20	2	0	0
Virginia	----	----	----	----	----	----	1	----
West Virginia	5	3	8	----	28	23	0	1
North Carolina	34	45	----	----	15	----	2	3
South Carolina	24	20	47	119	----	1	2	0
Georgia	----	12	7	2	19	17	1	0
Florida	6	11	----	----	4	4	2	0

[1] New York City only.

[2] Week ended Friday.

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended August 2, 1930, and August 3, 1929—Continued

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended Aug. 2, 1930	Week ended Aug. 3, 1929	Week ended Aug. 2, 1930	Week ended Aug. 3, 1929	Week ended Aug. 2, 1930	Week ended Aug. 3, 1929	Week ended Aug. 2, 1930	Week ended Aug. 3, 1929
East South Central States:								
Kentucky					4		1	3
Tennessee	3	5	1		5		3	1
Alabama	5	13	1	7	13	5	2	1
Mississippi	6	19					0	
West South Central States:								
Arkansas	1	1	2		1		0	0
Louisiana	6	12	2	5	3	6	3	2
Oklahoma [2]	6	12				16	2	2
Texas	33	28		13	6	10	1	4
Mountain States:								
Montana	1	9				45	2	0
Idaho	1	1			2	1	0	0
Wyoming		3			1	1	0	2
Colorado	5	6			18	8	0	0
New Mexico	6	2	1	1	8	4	0	3
Arizona					13		0	2
Utah [1]		1			3	1	0	1
Pacific States:								
Washington	3	6			40	30	3	2
Oregon	3	8	2	1	26	22	1	1
California	35	36	10	12	158	34	5	6

Division and State	Poliomyelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended Aug. 2, 1930	Week ended Aug. 3, 1929	Week ended Aug. 2, 1930	Week ended Aug. 3, 1929	Week ended Aug. 2, 1930	Week ended Aug. 3, 1929	Week ended Aug. 2, 1930	Week ended Aug. 3, 1929
New England States:								
Maine	0	0	4	6	0	0	6	2
New Hampshire	0	0	1	1	0	0	0	0
Vermont	0	1	1	4	0	3	0	0
Massachusetts	13	1	41	64	0	0	6	9
Rhode Island	2	0	4	1	0	0	0	1
Connecticut	1	0	7	11	0	0	2	10
Middle Atlantic States:								
New York	13	11	70	54	0	0	18	25
New Jersey	2	1	17	30	0	0	3	17
Pennsylvania	1	5	78	76	1	1	40	38
East North Central States:								
Ohio	12	1	97	46	21	15	46	18
Indiana	2	0	20	105	40	53	15	10
Illinois	4	1	52	78	19	14	46	41
Michigan	2	9	47	67	25	37	7	7
Wisconsin	1	0	21	26	2	15	2	2
West North Central States:								
Minnesota	10	0	18	17	4	2	2	5
Iowa	4	0	8	16	22	14	4	5
Missouri	3	1	16	12	15	7	25	12
North Dakota	0	1	6	18	11	4	0	1
South Dakota	2	0	2	5	1	19	3	2
Nebraska	0	0	1	3	10	11	7	1
Kansas	6	1	17	17	12	12	17	18
South Atlantic States:								
Delaware	1	0	1	2	0	0	6	1
Maryland [1]	2	1	7	13	0	0	34	23
District of Columbia	0	0	2	4	0	0	6	5
Virginia	2	14						
West Virginia	0	1	13	17	4	4	35	31
North Carolina	3	3	35	34	0	0	70	58
South Carolina	2	1	2	8	3	0	83	87
Georgia	0	0	14	5	0	0	71	43
Florida	0	0	1	4	0	0	3	2

[1] Week ended Friday.
[2] Figures for 1930 are exclusive of Oklahoma City and Tulsa.

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended August 2, 1930, and August 3, 1929—Continued

Division and State	Poliomyelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended Aug. 2, 1930	Week ended Aug. 3, 1929	Week ended Aug. 2, 1930	Week ended Aug. 3, 1929	Week ended Aug. 2, 1930	Week ended Aug. 3, 1929	Week ended Aug. 2, 1930	Week ended Aug. 3, 1929
East South Central States:								
Kentucky	0	1	22	17	0	5	34	18
Tennessee	2	6	6	11	2	6	47	74
Alabama	2	0	4	21	0	0	42	33
Mississippi	3	0	4	8	1	0	38	53
West South Central States:								
Arkansas	8	0	2	2	2	0	35	18
Louisiana	28	0	10	7	0	0	38	37
Oklahoma [3]	12	0	12	8	5	8	43	60
Texas	6	0	22	16	14	8	26	48
Mountain States:								
Montana	0	0	7	8	3	2	3	3
Idaho	1	1	0	0	1	5	4	5
Wyoming	0	0	3	3	0	8	0	0
Colorado	0	1	6	2	1	9	8	7
New Mexico	0	1	2	2	1	0	4	7
Arizona	0	0	1	0	0	0	7	3
Utah [2]	0	0	2	3	0	3	1	1
Pacific States:								
Washington	1	0	13	4	16	30	5	6
Oregon	2	1	2	0	6	8	8	5
California	71	1	26	65	18	10	30	23

[1] Week ended Friday. [3] Figures for 1930 are exclusive of Oklahoma City and Tulsa.

SUMMARY OF MONTHLY REPORTS FROM STATES

The following summary of monthly State reports is published weekly and covers only those States from which reports are received during the current week:

State	Meningococcus meningitis	Diphtheria	Influenza	Malaria	Measles	Pellagra	Poliomyelitis	Scarlet fever	Smallpox	Typhoid fever
June, 1930										
California	20	212	79	2	5,919	13	208	393	178	77
District of Columbia	2	25	4	----	260	----	0	34	0	4
Maryland	0	57	24	3	138	----	0	188	0	28
Nevada	----	----	----	----	14	----	0	----	16	----
North Carolina	7	42	45	----	268	748	18	63	44	133
Virginia	6	58	323	77	1,259	169	7	72	6	137
July, 1930										
Iowa	2	12	----	----	78	----	9	36	182	7
Nebraska	4	25	----	----	76	----	0	39	80	19
New Mexico	----	15	----	18	52	13	5	14	12	30

June, 1930

	Cases
Anthrax:	
California	1
Actinomycosis:	
California	1
Chickenpox:	
California	941
District of Columbia	92
Maryland	312
North Carolina	228
Virginia	305
Diarrhea:	
Maryland	11
Diarrhea and dysentery:	
Virginia	1,750
Dysentery:	
California (amebic)	4
California (bacillary)	23
Maryland	11
Food poisoning:	
California	33
German measles:	
California	42
Maryland	124
North Carolina	141
Granuloma, coccidioidal:	
California	1
Impetigo contagiosa:	
Maryland	3
Jaundice:	
California	1
Leprosy:	
California	2
Lethargic encephalitis:	
California	4
Mumps:	
California	1,646
Maryland	60
Nevada	12
Ophthalmia neonatorum:	
North Carolina	2
Paratyphoid fever:	
California	10
North Carolina	1
Rabies in animals:	
California	90
Maryland	3
Rocky Mountain spotted or tick fever:	
California	2
Nevada	2
Scabies:	
Maryland	4
Septic sore throat:	
Maryland	4
North Carolina	6
Tetanus:	
California	6
Maryland	1
Trachoma:	
California	8
Maryland	1
Trichinosis:	
California	1
Tularaemia:	
California	2
Nevada	3
Virginia	5
Typhus fever:	
Maryland	11
Nevada	1
Virginia	5
Undulant fever:	
California	13
Maryland	3
Virginia	1
Vincent's angina:	
Maryland	6
Whooping cough:	
California	863
District of Columbia	19
Maryland	195
North Carolina	1,201
Virginia	751

July, 1930

Chicken pox:	
Iowa	23
Nebraska	47
New Mexico	16
Dysentery:	
New Mexico (bacillary)	1
Mumps:	
Iowa	32
Nebraska	24
New Mexico	10
Puerperal septicemia:	
New Mexico	1
Rabies:	
Iowa	1
Septic sore throat:	
Nebraska	9
Tetanus:	
Iowa	1
Undulant fever:	
Iowa	15
Whooping cough:	
Iowa	61
Nebraska	60
New Mexico	11

PATIENTS IN INSTITUTIONS FOR THE CARE OF EPILEPTICS, OCTOBER TO DECEMBER, 1929

Reports for the fourth quarter of the year 1929 have been received from 13 institutions for the care and treatment of epileptics, located in 13 States. The total number of patients in these institutions on December 31, 1929, including those on parole or otherwise absent, but still on the books, was 9,324.

The first admissions were as follows:

Month	Male	Female	Total
October, 1929	83	62	145
November, 1929	56	47	103
December, 1929	59	41	100
Total	198	150	348

Of the new admissions during the three months, 56.9 per cent were males and 43.1 per cent were females, the ratio being 132 males per 100 females.

During the quarter 193 patients were discharged—128 males and 65 females. Ninety-one male patients and 65 female patients died. The annual death rates, based on the number of persons on the books of the institutions the middle of November, were: Males, 73.7 per 1,000; females, 58.8 per 1,000; persons, 66.6 per 1,000.

On December 31, 1929, there were 4,920 males and 4,404 females on the books of the institutions, giving a ratio of 112 males per 100 females.

The following table shows for the 13 institutions the number of patients in the hospitals and on parole at the beginning of the quarter and at the end of each month and the percentages of the total patients who were on parole.

	Oct. 1, 1929	Oct. 31, 1929	Nov. 30, 1929	Dec. 31, 1929
Patients in hospitals:				
Male	4,584	4,630	4,631	4,562
Female	4,162	4,204	4,208	4,175
Total	8,746	8,834	8,839	8,737
Patients on parole:				
Male	276	262	273	358
Female	196	178	186	229
Total	472	440	459	587
Total patients on books:				
Male	4,860	4,892	4,904	4,920
Female	4,358	4,382	4,394	4,404
Total	9,218	9,274	9,298	9,324
Per cent of total patients on parole:				
Male	5.7	5.4	5.6	7.3
Female	4.5	4.1	4.2	5.2
Total	5.1	4.7	4.9	6.3

GENERAL CURRENT SUMMARY AND WEEKLY REPORTS FROM CITIES

The 94 cities reporting cases used in the following table are situated in all parts of the country and have an estimated aggregate population of more than 31,350,000. The estimated population of the 87 cities reporting deaths is more than 29,760,000. The estimated expectancy is based on the experience of the last nine years, excluding epidemics.

Weeks ended July 26, 1930, and July 27, 1929

	1930	1929	Estimated expectancy
Cases reported			
Diphtheria:			
46 States	585	834	
94 cities	233	410	467
Measles:			
45 States	1,966	2,009	
94 cities	660	418	
Meningococcus meningitis:			
46 States	64	103	
94 cities	31	62	
Poliomyelitis:			
46 States	221	53	
Scarlet fever:			
46 States	782	1,079	
94 cities	302	353	278
Smallpox:			
46 States	382	417	
94 cities	41	49	17
Typhoid fever:			
46 States	830	778	
94 cities	110	105	124
Deaths reported			
Influenza and pneumonia:			
87 cities	336	297	
Smallpox:			
87 cities	0	0	

City reports for week ended July 26, 1930

The "estimated expectancy" given for diphtheria, poliomyelitis, scarlet fever, smallpox, and typhoid fever is the result of an attempt to ascertain from previous occurrence the number of cases of the disease under consideration that may be expected to occur during a certain week in the absence of epidemics. It is based on reports to the Public Health Service during the past nine years. It is in most instances the median number of cases reported in the corresponding weeks of the preceding years. When the reports include several epidemics, or when for other reasons the median is unsatisfactory, the epidemic periods are excluded, and the estimated expectancy is the mean number of cases reported for the week during nonepidemic years.

If the reports have not been received for the full nine years, data are used for as many years as possible, but no year earlier than 1921 is included. In obtaining the estimated expectancy, the figures are smoothed when necessary to avoid abrupt deviation from the usual trend. For some of the diseases given in the table the available data were not sufficient to make it practicable to compute the estimated expectancy.

Division, State, and city	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
		Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
NEW ENGLAND								
Maine:								
Portland	1	1	0		0	1	1	1
New Hampshire:								
Concord	0	0	0		0	0	0	0
Manchester	0	0	0		1	0	0	1
Nashua	0	0	0		0	4	0	0
Vermont:								
Barre	0	0	0		0	1	0	0
Burlington	0	0	1		0	0	0	0
Massachusetts:								
Boston	12	23	9		0	55	13	9
Fall River	1	2	0		0	2	4	3
Springfield	1	1	0		0	2	2	0
Worcester	1	1	0		0	8	0	1
Rhode Island:								
Pawtucket	0	0	0		0	0	0	2
Providence	3	3	1		0	9	4	2
Connecticut:								
Bridgeport	0	2	0		0	0	0	0
Hartford	1	2	0		0	1	0	0
New Haven	1	1	0		0	0	0	0

City reports for week ended July 26, 1930—Continued

Division, State, and city	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
		Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
MIDDLE ATLANTIC								
New York:								
Buffalo	5	7	5		0	0	0	5
New York	34	201	44		0	201	17	93
Rochester	3	3	1		0	0	1	4
Syracuse	6	2	0		0	30	0	1
New Jersey:								
Camden	0	3	1		0	8	0	1
Newark	2	7	9		0	9	3	5
Trenton	0	0	0		0	0	0	1
Pennsylvania:								
Philadelphia	13	31	6	5	3	34	25	24
Pittsburgh	4	12	5		0	34	1	13
Reading	0	1	2		0	1	2	3
Scranton	1	2	0		0	0	0	0
EAST NORTH CENTRAL								
Ohio:								
Cincinnati	4	4	0		0	10	0	8
Cleveland	31	17	5		0	10	12	8
Columbus	6	2	3	2	2	3	1	0
Toledo	7	3	3		0	1	3	4
Indiana:								
Fort Wayne	0	2	0		0	0	0	0
Indianapolis	2	2	0		0	6	1	5
South Bend		0						
Terre Haute	0	0	0		0	1	1	0
Illinois:								
Chicago	32	58	48	2	0	13	34	23
Springfield	0	0	0		0	3	0	0
Michigan:								
Detroit	12	25	17		1	17	11	9
Flint	0	2	0		0	11	1	2
Grand Rapids	1	1	1		1	2	0	0
Wisconsin:								
Kenosha	2	0	0		0	2	3	0
Madison	3	1	0			0	1	
Milwaukee	30	8	5	1	1	16	8	4
Racine	4	1	0		0	0	2	0
Superior	7	0	0		0	0	0	0
WEST NORTH CENTRAL								
Minnesota:								
Duluth	1	1	1		0	1	0	1
Minneapolis	3	9	4		0	3	4	2
St. Paul	13	4	1		0	2	0	4
Iowa:								
Davenport	0	1	0			0	0	
Des Moines	0	1	0			0	0	
Sioux City	0	2	0			0	0	
Waterloo	0	0	0			0	0	
Missouri:								
Kansas City		2						
St. Joseph	0	1	0		0	0	0	1
St. Louis	12	16	5			16	3	
North Dakota:								
Fargo	0	0	1		0	0	5	0
Grand Forks	0	0	0			0	0	
South Dakota:								
Aberdeen	2	0	0			4	0	
Sioux Falls	0	0	0			0	0	
Nebraska:								
Omaha	0	2	5		0	2	1	2
Kansas:								
Topeka	0	0	0		1	0	3	0
Wichita	0	1	0		0	9	0	1

City reports for week ended July 26, 1930—Continued

Division, State, and city	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
		Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
SOUTH ATLANTIC								
Delaware:								
Wilmington	0	1	0	----	0	1	0	2
Maryland:								
Baltimore	6	10	8	1	0	1	7	13
Cumberland	0	0	0	----	0	0	0	0
Frederick	0	0	0	----	0	0	0	0
District of Columbia:								
Washington	0	4	7	1	1	13	0	9
Virginia:								
Lynchburg	0	1	0	----	0	0	0	0
Norfolk	1	0	2	----	1	0	1	3
Richmond	0	2	1	----	1	2	0	4
Roanoke	0	0	0	----	0	1	0	1
West Virginia:								
Charleston	0	0	0	----	0	0	0	2
Wheeling	0	0	0	----	0	0	0	1
North Carolina:								
Raleigh	0	0	0	----	0	0	0	0
Wilmington	0	0	0	----	0	1	0	0
Winston-Salem	5	0	0	----	0	0	1	2
South Carolina:								
Charleston	0	0	0	4	0	0	0	1
Columbia	----	0	----	----	----	----	----	----
Georgia:								
Atlanta	----	2	----	----	----	----	----	----
Brunswick	0	0	0	----	0	0	0	0
Savannah	0	0	2	1	0	1	1	1
Florida:								
Miami	0	1	0	----	0	0	2	2
St. Petersburg	----	0	----	----	0	----	----	1
Tampa	0	0	1	----	0	5	0	1
EAST SOUTH CENTRAL								
Kentucky:								
Covington	0	0	1	----	0	3	0	4
Tennessee:								
Memphis	0	1	0	----	0	0	0	1
Nashville	0	1	0	----	0	0	0	4
Alabama:								
Birmingham	0	1	0	----	0	6	0	3
Mobile	0	0	2	----	0	0	0	2
Montgomery	0	0	1	----	----	0	0	----
WEST SOUTH CENTRAL								
Arkansas:								
Fort Smith	0	0	0	----	----	0	0	----
Little Rock	0	0	0	----	0	0	0	2
Louisiana:								
New Orleans	0	5	3	4	3	0	0	9
Shreveport	0	0	0	----	0	1	1	0
Oklahoma:								
Tulsa	0	0	0	----	----	0	0	----
Texas:								
Dallas	0	3	4	----	0	1	1	0
Fort Worth	0	0	0	----	0	0	0	2
Galveston	0	0	0	----	0	0	0	2
Houston	0	2	1	----	0	0	0	2
San Antonio	0	1	1	----	0	0	0	5
MOUNTAIN								
Montana:								
Billings	0	0	0	----	0	0	0	1
Great Falls	1	0	0	----	0	1	1	0
Helena	0	0	0	----	0	1	0	0
Missoula	0	0	0	----	0	0	0	1
Idaho:								
Boise	0	0	0	----	0	2	0	0
Colorado:								
Denver	0	7	8	----	0	4	0	7
Pueblo	2	1	0	----	0	6	5	0
New Mexico:								
Albuquerque	0	0	0	----	0	1	0	0

City reports for week ended July 26, 1930—Continued

Division, State, and city	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
		Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
MOUNTAIN—contd.								
Arizona:								
Phoenix	0	0	0	----	0	0	0	0
Utah:								
Salt Lake City	0	2	0	----	0	6	3	0
Nevada:								
Reno	0	0	0	----	0	0	0	0
PACIFIC								
Washington:								
Seattle	8	2	0	----	----	22	11	----
Spokane	1	0	0	----	----	8	0	----
Tacoma	2	2	1	----	0	7	0	1
Oregon:								
Portland	2	5	1	2	0	5	4	2
Salem	4	0	0	----	0	0	1	0
California:								
Los Angeles	17	29	11	9	1	37	22	0
Sacramento	1	2	0	----	0	3	4	1
San Francisco	6	9	2	1	0	4	2	1

Division, State, and city	Scarlet fever		Smallpox			Tuberculosis, deaths reported	Typhoid fever			Whooping cough, cases reported	Deaths, all causes
	Cases, estimated expectancy	Cases reported	Cases, estimated expectancy	Cases reported	Deaths reported		Cases, estimated expectancy	Cases reported	Deaths reported		
NEW ENGLAND											
Maine:											
Portland	1	2	0	0	0	1	0	[1] 1	0	3	31
New Hampshire:											
Concord	0	0	0	0	0	1	0	0	0	0	8
Manchester	0	0	0	0	0	1	0	0	0	0	23
Nashua	0	0	0	0	0	0	0	0	0	0	----
Vermont:											
Barre	0	0	0	0	0	1	0	0	0	0	2
Burlington	0	0	0	0	0	0	0	0	0	0	----
Massachusetts:											
Boston	19	16	0	0	0	16	2	0	0	32	187
Fall River	0	3	0	0	0	2	0	1	0	1	27
Springfield	1	0	0	0	0	1	0	0	0	3	21
Worcester	1	2	0	0	0	3	0	0	0	5	44
Rhode Island:											
Pawtucket	0	2	0	0	0	0	0	0	0	0	15
Providence	2	4	0	0	0	2	0	0	0	17	58
Connecticut:											
Bridgeport	2	1	0	0	0	2	1	0	0	0	28
Hartford	2	0	0	0	0	1	0	0	0	2	39
New Haven	1	0	0	0	0	0	0	1	0	3	32
MIDDLE ATLANTIC											
New York:											
Buffalo	6	7	0	0	0	7	1	0	0	35	121
New York	37	24	0	0	0	115	24	10	3	102	1,541
Rochester	1	1	0	0	0	4	0	0	0	7	60
Syracuse	2	5	0	0	0	0	0	0	0	89	37
New Jersey:											
Camden	0	0	0	0	0	0	1	0	0	0	41
Newark	5	3	0	0	0	7	1	0	0	20	80
Trenton	0	4	0	0	0	3	1	1	0	0	42
Pennsylvania:											
Philadelphia	19	27	0	0	0	28	5	4	1	30	559
Pittsburgh	9	4	0	0	0	6	3	0	0	20	161
Reading	0	0	0	0	0	1	0	0	0	4	44
Scranton	0	1	0	0	0	0	1	0	0	9	----

[1] Nonresident.

City reports for week ended July 26, 1930—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuberculosis, deaths reported	Typhoid fever			Whooping cough, cases reported	Deaths, all causes
	Cases, estimated expectancy	Cases reported	Cases, estimated expectancy	Cases reported	Deaths reported		Cases, estimated expectancy	Cases reported	Deaths reported		
EAST NORTH CENTRAL											
Ohio:											
Cincinnati	4	6	0	1	0	15	2	3	0	4	161
Cleveland	11	17	0	0	0	15	3	5	0	66	196
Columbus	2	0	1	0	0	4	0	0	0	0	97
Toledo	2	0	0	2	0	5	2	0	0	5	81
Indiana:											
Fort Wayne	0	2	0	0	0	0	0	5	0	0	19
Indianapolis	2	1	2	5	0	7	1	1	0	18	91
South Bend	0	---	0	---	---	---	0	---	---	---	---
Terre Haute	1	0	0	1	0	0	0	0	0	0	16
Illinois:											
Chicago	32	50	1	4	0	43	5	2	2	72	637
Springfield	0	0	0	0	0	0	0	0	0	2	16
Michigan:											
Detroit	28	18	0	0	0	21	4	1	0	102	250
Flint	4	5	0	1	0	1	0	0	0	7	16
Grand Rapids	3	5	0	1	0	0	0	2	0	2	27
Wisconsin:											
Kenosha	0	2	0	0	0	0	1	0	0	11	4
Madison	1	1	0	0	---	---	0	1	---	7	---
Milwaukee	6	10	0	0	0	3	0	0	0	79	92
Racine	1	3	0	0	0	0	0	1	0	11	15
Superior	2	3	0	0	0	1	0	1	0	0	6
WEST NORTH CENTRAL											
Minnesota:											
Duluth	3	0	0	1	0	1	0	0	0	11	25
Minneapolis	11	2	0	1	0	0	1	3	1	0	71
St. Paul	7	1	1	0	0	3	1	1	0	6	49
Iowa:											
Davenport	0	0	0	6	---	---	0	0	---	0	---
Des Moines	2	2	1	3	---	---	0	0	---	0	28
Sioux City	0	2	0	4	---	---	0	0	---	1	---
Waterloo	0	0	0	2	---	---	0	0	---	4	---
Missouri:											
Kansas City	2	---	0	---	---	---	2	---	---	---	---
St. Joseph	0	2	0	0	0	1	0	1	0	2	29
St. Louis	6	1	0	0	0	9	5	3	3	6	262
North Dakota:											
Fargo	1	0	0	0	0	0	0	0	0	3	8
Grand Forks	0	0	0	1	---	---	0	0	---	0	---
South Dakota:											
Aberdeen	0	0	0	1	---	---	0	2	---	2	---
Sioux Falls	0	0	0	1	---	---	0	0	---	0	9
Nebraska:											
Omaha	1	2	0	2	0	1	0	15	0	2	72
Kansas:											
Topeka	1	3	0	0	0	0	0	1	0	15	20
Wichita	1	1	0	0	0	0	2	1	0	0	32
SOUTH ATLANTIC											
Delaware:											
Wilmington	1	2	0	0	0	0	0	0	0	4	30
Maryland:											
Baltimore	6	4	0	0	0	19	6	2	1	37	286
Cumberland	0	0	0	0	0	0	0	0	0	0	10
Frederick	0	0	0	0	0	0	0	0	0	0	---
District of Columbia:											
Washington	4	2	0	0	0	15	3	1	0	8	182
Virginia:											
Lynchburg	0	0	0	0	0	0	1	4	0	2	15
Norfolk	0	0	0	1	0	0	2	3	0	0	---
Richmond	2	4	0	0	0	3	2	0	0	0	79
Roanoke	0	1	0	0	0	3	0	1	0	0	---
West Virginia:											
Charleston	0	0	0	0	0	1	1	1	0	12	18
Wheeling	1	1	0	0	0	0	0	0	0	0	15
North Carolina:											
Raleigh	0	0	0	1	0	0	0	0	0	0	18
Wilmington	0	1	0	0	0	0	0	0	0	23	16
Winston-Salem	0	2	0	0	0	1	1	0	0	5	20

City reports for week ended July 26, 1930—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuberculosis, deaths reported	Typhoid fever			Whooping cough, cases reported	Deaths, all causes
	Cases, estimated expectancy	Cases reported	Cases, estimated expectancy	Cases reported	Deaths reported		Cases, estimated expectancy	Cases reported	Deaths reported		
SOUTH ATLANTIC—continued											
South Carolina:											
Charleston	0	0	0	0	0	1	1	4	0	0	40
Columbia	0	----	0	----	----	----	1	----	----	----	----
Georgia:											
Atlanta	1	----	1	----	----	----	2	----	----	----	----
Brunswick	0	0	0	0	0	0	1	0	0	0	----
Savannah	0	1	0	0	0	0	2	4	0	0	21
Florida:											
Miami	0	0	0	0	0	3	1	0	0	0	27
St. Petersburg	0	----	0	----	0	2	0	----	1	----	11
Tampa	0	0	0	0	0	3	0	0	0	0	26
EAST SOUTH CENTRAL											
Kentucky:											
Covington	0	1	0	0	0	0	0	0	1	0	----
Tennessee:											
Memphis	1	1	0	0	0	4	9	9	0	0	63
Nashville	0	2	1	3	0	4	6	0	0	1	53
Alabama:											
Birmingham	1	3	1	0	0	5	5	2	0	6	64
Mobile	0	0	0	0	0	0	1	0	0	0	27
Montgomery	0	1	0	0	----	----	2	0	----	0	----
WEST SOUTH CENTRAL											
Arkansas:											
Fort Smith	0	0	0	0	----	----	1	0	----	3	----
Little Rock	0	0	0	0	0	1	1	1	0	0	----
Louisiana:											
New Orleans	3	7	0	0	0	12	4	3	1	4	121
Shreveport	0	0	0	0	0	2	1	0	0	0	24
Oklahoma:											
Tulsa	0	2	0	0	----	----	2	4	----	4	----
Texas:											
Dallas	1	5	0	0	0	1	3	3	0	4	55
Ft. Worth	1	0	1	0	0	1	1	0	0	0	32
Galveston	0	0	0	0	0	1	0	0	0	0	13
Houston	1	0	0	1	0	4	1	3	0	0	52
San Antonio	1	1	0	0	0	6	2	1	1	0	71
MOUNTAIN											
Montana:											
Billings	0	0	0	0	0	0	0	0	0	2	4
Great Falls	0	1	0	0	0	0	1	0	0	0	7
Helena	0	0	0	0	0	0	0	1	0	4	2
Missoula	0	0	0	0	0	1	0	0	0	0	11
Idaho:											
Boise	0	0	1	0	0	1	0	1	0	1	5
Colorado:											
Denver	3	1	0	1	0	3	1	0	0	36	66
Pueblo	1	0	0	0	0	0	0	0	0	7	10
New Mexico:											
Albuquerque	0	0	0	0	0	2	0	0	0	0	7
Arizona:											
Phoenix	0	1	0	0	0	1	0	0	0	0	17
Utah:											
Salt Lake City	1	1	0	0	0	1	1	0	0	32	20
Nevada:											
Reno	0	0	0	1	0	0	0	0	0	0	3
PACIFIC											
Washington:											
Seattle	2	5	1	2	----	----	0	1	----	17	----
Spokane	0	0	0	3	----	----	0	0	----	7	----
Tacoma	0	2	1	2	0	0	0	0	1	2	27
Oregon:											
Portland	1	0	5	3	0	1	1	0	0	10	59
Salem	0	0	0	0	0	0	0	0	0	13	----
California:											
Los Angeles	11	6	7	1	0	19	3	2	1	41	209
Sacramento	1	1	0	0	0	3	0	1	0	1	24
San Francisco	5	5	0	3	0	7	2	1	0	0	141

City reports for week ended July 26, 1930—Continued

Division, State, and city	Meningococcus meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, estimated expectancy	Cases	Deaths
NEW ENGLAND									
Massachusetts:									
Boston	1	0	0	0	0	0	1	3	0
Connecticut:									
Bridgeport	0	0	0	0	0	0	0	1	0
MIDDLE ATLANTIC									
New York:									
Buffalo	0	0	0	0	0	0	0	2	0
New York [1]	7	6	0	2	0	0	12	2	1
Syracuse	0	1	0	0	0	0	0	6	0
New Jersey:									
Newark	2	1	0	0	0	0	0	0	0
Pennsylvania:									
Philadelphia	1	0	0	0	4	1	0	1	1
EAST NORTH CENTRAL									
Ohio:									
Cleveland	0	0	0	0	0	0	0	1	0
Toledo	1	0	1	1	0	0	0	1	1
Indiana:									
Indianapolis	2	0	0	0	0	0	0	0	0
Illinois:									
Chicago	2	1	1	0	1	1	2	0	0
Michigan:									
Detroit	7	1	1	0	0	0	1	0	1
Grand Rapids	0	0	0	0	0	0	0	1	0
Wisconsin:									
Milwaukee	1	1	0	0	0	0	0	0	0
WEST NORTH CENTRAL									
Minnesota:									
Minneapolis	0	0	0	0	0	0	0	1	0
Missouri:									
St. Louis	0	1	0	1	0	0	0	0	0
Kansas:									
Wichita	0	0	0	0	0	0	0	0	1
SOUTH ATLANTIC									
Maryland:									
Baltimore	1	1	1	1	0	0	1	1	0
Virginia:									
Norfolk	1	0	0	0	0	0	1	3	0
Richmond	0	1	0	1	0	0	0	1	0
North Carolina:									
Raleigh	0	0	0	0	0	1	0	0	0
Wilmington	0	0	0	0	1	0	0	0	0
Winston-Salem	0	0	0	0	9	2	0	0	0
South Carolina:									
Charleston	0	0	0	1	3	2	0	0	0
Georgia:									
Savannah [1]	0	0	0	0	2	0	0	0	0
Florida:									
Tampa [1]	0	0	0	0	1	0	0	0	0
EAST SOUTH CENTRAL									
Tennessee:									
Memphis	3	0	0	0	0	1	0	0	0
Alabama:									
Birmingham	0	0	1	0	0	1	0	0	0

[1] Typhus fever, 3 cases: 1 case at New York City, N. Y., 1 case at Savannah, Ga., and 1 case at Tampa, Fla.

City reports for week ended July 26, 1930—Continued

Division, State, and city	Meningococcus meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, estimated expectancy	Cases	Deaths
WEST SOUTH CENTRAL									
Arkansas:									
Little Rock	0	0	0	0	0	1	0	0	0
Louisiana:									
New Orleans	0	0	0	0	1	0	1	0	0
Shreveport	0	0	0	1	0	1	0	4	0
Texas:									
Dallas	0	0	0	0	2	2	0	5	1
Fort Worth	0	0	0	0	0	1	1	0	0
San Antonio	0	0	0	0	0	0	0	0	1
MOUNTAIN									
Utah:									
Salt Lake	1	1	0	0	0	0	0	0	0
PACIFIC									
Oregon:									
Portland	0	0	1	2	0	0	0	0	0
California:									
Los Angeles	0	0	0	0	0	0	1	40	2
Sacramento	1	0	0	0	2	0	0	0	0
San Francisco	1	1	0	0	0	0	0	2	0

The following table gives the rates per 100,000 population for 98 cities for the 5-week period ended July 26, 1930, compared with those for a like period ended July 27, 1929. The population figures used in computing the rates are approximate estimates, authoritative figures for many of the cities not being available. The 98 cities reporting cases have an estimated aggregate population of more than 32,000,000. The 91 cities reporting deaths have more than 30,500,000 estimated population.

Summary of weekly reports from cities, June 22 to July 26, 1930—Annual rates per 100,000 population, compared with rates for the corresponding period of 1929 [1]

DIPHTHERIA CASE RATES

	Week ended—									
	June 28, 1930	June 29, 1929	July 5, 1930	July 6, 1929	July 12, 1930	July 13, 1929	July 19, 1930	July 20, 1929	July 26, 1930	July 27, 1929
98 cities	67	110	59	89	59	88	[2] 49	73	[3] 39	68
New England	62	94	51	70	38	79	33	83	22	58
Middle Atlantic	65	144	59	101	52	99	48	76	35	75
East North Central	98	131	91	128	87	119	66	105	[4] 50	103
West North Central	70	85	36	77	66	69	38	54	[5] 38	21
South Atlantic	24	34	24	34	29	43	[6] 43	30	[7] 39	28
East South Central	15	34	40	27	27	41	13	27	27	27
West South Central	37	69	52	72	64	84	[8] 38	69	34	99
Mountain	0	26	9	26	26	26	69	17	69	9
Pacific	64	84	38	43	61	41	38	41	33	31

[1] The figures given in this table are rates per 100,000 population, annual basis, and not the number of cases reported. Populations used are estimated as of July 1, 1930, and 1929, respectively.

See end of table for other footnotes.

Summary of weekly reports from cities, June 22 to July 26, 1930—Annual rates per 100,000 population, compared with rates for the corresponding period of 1929—Continued

MEASLES CASE RATES

	Week ended—									
	June 28, 1930	June 29, 1929	July 5, 1930	July 6, 1929	July 12, 1930	July 13, 1929	July 19, 1930	July 20, 1929	July 26, 1930	July 27, 1929
98 cities	500	267	276	195	257	150	[3] 151	98	[3] 110	69
New England	762	211	498	209	421	186	235	146	175	101
Middle Atlantic	640	99	339	76	322	51	205	47	152	27
East North Central	334	620	170	474	155	351	71	210	[4] 60	149
West North Central	264	256	137	114	127	104	57	52	[5] 73	58
South Atlantic	234	137	165	73	130	49	[6] 114	43	[7] 52	17
East South Central	256	7	142	27	202	14	47	7	61	7
West South Central	19	156	26	69	19	61	[8] 11	4	7	27
Mountain	1,416	148	712	148	566	104	240	61	172	70
Pacific	931	208	527	138	562	152	361	109	191	77

SCARLET FEVER CASE RATES

98 cities	109	112	77	88	72	83	[3] 54	64	[3] 50	59
New England	124	119	66	90	66	83	60	56	66	56
Middle Atlantic	89	72	57	46	51	41	37	35	36	19
East North Central	184	191	116	173	115	160	87	103	[4] 77	110
West North Central	97	104	102	38	83	79	42	54	[5] 31	77
South Atlantic	62	62	57	60	62	64	[6] 45	69	[7] 37	60
East South Central	61	34	13	55	47	48	20	55	54	27
West South Central	41	42	49	23	37	42	[7] 23	72	49	57
Mountain	60	70	163	44	86	35	77	78	26	26
Pacific	57	164	45	135	50	89	57	65	45	65

SMALLPOX CASE RATES

98 cities	13	15	7	15	7	8	[3] 6	13	[3] 7	8
New England	0	0	0	0	0	0	0	0	0	0
Middle Atlantic	0	0	0	0	0	0	0	0	0	0
East North Central	10	38	5	41	9	19	10	32	[4] 8	16
West North Central	51	19	13	13	9	15	13	21	[5] 22	21
South Atlantic	9	2	2	2	0	2	[6] 4	2	[7] 2	0
East South Central	7	7	20	21	20	7	0	7	20	7
West South Central	22	4	0	11	7	15	[8] 8	0	4	8
Mountain	51	113	51	35	9	35	17	44	17	9
Pacific	50	14	38	24	43	10	21	34	26	22

TYPHOID FEVER CASE RATES

98 cities	13	12	10	10	16	14	[3] 15	18	[3] 18	18
New England	9	9	7	4	4	4	9	9	7	29
Middle Atlantic	5	7	6	6	10	7	4	10	7	7
East North Central	10	3	1	4	6	7	9	8	[4] 13	8
West North Central	13	15	8	13	9	10	23	19	[5] 56	13
South Atlantic	37	30	26	32	55	7	[6] 37	32	[7] 35	37
East South Central	67	34	94	48	94	157	67	144	74	103
West South Central	34	34	49	8	37	84	[8] 61	57	41	69
Mountain	34	52	0	17	0	9	26	52	17	44
Pacific	5	19	5	7	17	2	19	5	12	7

See end of table for footnotes.

Summary of weekly reports from cities, June 22 to July 26, 1930—Annual rates per 100,000 population, compared with rates for the corresponding period of 1929—Continued

INFLUENZA DEATH RATES

	Week ended—									
	June 28, 1930	June 29, 1929	July 5, 1930	July 6, 1929	July 12, 1930	July 13, 1929	July 19, 1930	July 20, 1929	July 26, 1930	July 27, 1929
91 cities	3	5	4	2	4	3	[1] 3	3	[1] 3	3
New England	0	2	2	0	0	2	0	0	0	2
Middle Atlantic	2	4	4	3	4	2	3	2	1	2
East North Central	3	4	2	1	3	3	2	3	[4] 3	4
West North Central	0	0	0	0	6	0	0	3	[5] 4	3
South Atlantic	5	4	5	2	2	4	[6] 0	6	[7] 4	4
East South Central	15	15	7	15	15	7	0	0	0	0
West South Central	11	4	15	4	8	4	11	20	11	4
Mountain	0	44	0	0	0	26	9	0	0	9
Pacific	3	3	9	0	3	0	6	3	3	0

PNEUMONIA DEATH RATES

91 cities	68	64	55	63	54	55	[1] 44	55	[1] 56	49
New England	49	58	29	49	40	29	35	70	40	31
Middle Atlantic	75	65	58	67	57	62	56	65	72	57
East North Central	56	69	41	56	38	50	32	40	[4] 37	38
West North Central	86	48	62	63	74	51	38	36	[5] 42	51
South Atlantic	66	62	55	69	55	58	[6] 47	54	[7] 76	69
East South Central	103	75	162	75	81	30	59	52	103	52
West South Central	92	66	84	109	84	82	50	27	77	86
Mountain	77	104	60	61	103	44	51	96	77	61
Pacific	55	38	64	31	61	53	18	63	9	25

[1] Columbia, S. C., and Fort Smith, Ark., not included.
[2] South Bend, Ind., Kansas City, Mo., Columbia, S. C., and Atlanta, Ga., not included.
[4] South Bend, Ind., not included.
[5] Kansas City, Mo., not included.
[6] Columbia, S. C., not included.
[7] Columbia, S. C., and Atlanta, Ga., not included.
[8] Fort Smith, Ark., not included.

FOREIGN AND INSULAR

CANADA

Provinces—Communicable diseases—Week ended July 26, 1930.—The Department of Pensions and National Health reports cases of certain communicable diseases from eight Provinces of Canada for the week ended July 26, 1930, as follows:

Province	Cerebrospinal fever	Influenza	Lethargic encephalitis	Poliomyelitis	Smallpox	Typhoid fever
Prince Edward Island [1]						
Nova Scotia		2		1		
New Brunswick						7
Quebec	1					10
Ontario	4	2	1	5	10	3
Saskatchewan				3	3	1
Alberta	1			1	2	
British Columbia	2	9			1	2
Total	8	13	1	10	16	23

[1] No case of any disease included in the table was reported during the week.

Quebec Province—Communicable diseases—Week ended July 26, 1930.—The Bureau of Health of the Province of Quebec, Canada, reports cases of certain communicable diseases for the week ended July 26, 1930, as follows:

Disease	Cases	Disease	Cases
Cerebrospinal meningitis	1	Mumps	6
Chicken pox	5	Scarlet fever	30
Diphtheria	27	Tuberculosis (pulmonary)	27
Erysipelas	1	Tuberculosis (other forms)	1
Influenza	1	Typhoid fever	10
Measles	50	Whooping cough	18

DENMARK

Communicable diseases—May, 1930.—During the month of May, 1930, cases of certain communicable diseases were reported in Denmark as follows:

Disease	Cases	Disease	Cases
Cerebrospinal meningitis	7	Mumps	1,450
Chicken pox	61	Paratyphoid fever	5
Diphtheria and croup	364	Poliomyelitis	1
Erysipelas	232	Puerperal fever	21
German measles	10	Scarlet fever	116
Influenza	3,152	Typhoid fever	1
Lethargic encephalitis	10	Undulant fever (Bac. abort. Bang)	58
Measles	2,063	Whooping cough	1,193

VIRGIN ISLANDS

Communicable diseases—June, 1930.—During the month of June, 1930, cases of certain communicable diseases were reported in the Virgin Islands as follows:

St. Thomas and St. John:	Cases
Chicken pox	1
Gonorrhea	2
Pellagra	1
Syphilis	2
Tuberculosis	1

St. Croix:	Cases
Gonorrhea	3
Syphilis	1
Tuberculosis	1
Uncinariasis	2

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER

From medical officers of the Public Health Service, American consuls, International Office of Public Hygiene, Pan American Sanitary Bureau, health section of the League of Nations, and other sources. The reports contained in the following tables must not be considered as complete or final as regards either the list of countries included or the figures for the particular countries for which reports are given.

CHOLERA

[C indicates cases; D, deaths; P, present]

Place		Jan. 12–Feb. 8, 1930	Feb. 9–Mar. 8, 1930	Mar. 9–Apr. 5, 1930	Apr. 6–May 3, 1930	Week ended— May, 1930 10	17	24	31	June, 1930 7	14	21	28	July, 1930 5	12	19	26	Aug. 2, 1930
Afghanistan	C														[1] P			
China:																		
Canton	C						1	1	1		2				2	1		
Manchuria—Dairen	C		1															
Swatow	C								3,	4	3							
India	C	6,461	5,914	10,817	41,462	15,596	14,600	12,468	13,647	10,088								
	D	3,606	3,371	5,866	27,906	12,782	11,882	9,756	10,458	7,802								
Bassein	C				7	3	4											
	D				5	3	2											
Bombay	C			4														
Calcutta	C	202	269	354	647	194	175	142	98	78	73	94	77	81	53	49		
	D	110	153	220	414	125	107	83	57	44	36	36	63	54	28	23		
Negapatam	C	12									1							
	D	4									1							
Rangoon	C	3	3	2	1		5	2	2	1	1	2	2	1				
	D	3	1	2	1		1		2	1	1	1	1	1				
Tuticorin	C	3																
	D	1																
India (French):																		
Chandernagor	C		4	1	6	2	2	2				1	2					
	D		2	3	5	1	4	1				1	1					
Karikal	C		4	12	1								3					
	D		1	9	1								3					
Indo-China (see also table below):																		
Pnompenh	C	11	9		2	1				5	10	11	14	9	16	7		
	D	8	7	6			2	2	1	1	4	7	6	6	9	5	2	
Saigon and Cholon	C	2	5	14	76	59	40	48	13	17	19	7	5	7	1	1	1	
	D	2	4	6	55	43	27	24	7	11	10	2		3				
Philippine Islands:[2]																		
Ports—																		
Cebu	C												1	20	13	13	9	5
	D													9	7	12	8	4

Iloilo	C															1	11	17	9
	D																9	13	10
Manila	C								1										
Provinces—																			
Antique	C																		14
	D																		7
Bulacan	C									1			2					3	
	D									1									1
Capiz	C																	3	1
	D									4	21	92	132	241	205	121	57	63	
Cebu	C									4	10	42	65	45	78	61	35	37	
	D												1	1	3	75	66	250	
Iloilo	C													1	3	54	49	146	
	D											1	15	20	1				
La Union	C												11	9					
	D												10	20	25	8	20	37	
Leyte	C												3	4	15	2	4	18	
	D														2				
Masbate	C														2				
	D								10	3	11	19	11	7	90	193	165	178	
Misami	C								7	3	4	18	4	9	48	134	104	118	
	D																17	9	
Negros, Occidental	C															1	9	3	
	D																1		
Negros, Oriental	C																1		
	D											1	1	2					
Nueva Ecija	C									1				2		1			
	D									1									
Pampanga	C																		
	D																		
Pangasinan	C																		
	D																		
Rizal	C																		
	D																		
Tarlac	C									1									
	D									1									
Siam	C	3	7	1	29	12	4	13	4			6							2
	D		4		13	10	2	7	2			4							
Bangkok	C	3	2	2	15			6	3	5	3	3	1		3	4	1		
	D			1	4			2	1		3		2		1	1	1		
Nagara Pathom	C		1		10														
	D		1		2														
Songkla	C																		
	D														8		2		
On vessel:															4		2		
S. S. at Suva, Fiji Islands	C		1																
S. S. Sutley, at Batavia, from Calcutta	C		1																
S. S. Sassari, at Massoua, from Jeddah	C																		
	D								1										
On small boat at Port Cebu, from Bantayan Island	C								1										
	D									1									
										1									

[1] An outbreak of cholera was reported in June, 1930, in Afghanistan.

[1] Figures for cholera in the Philippine Islands are subject to correction.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

CHOLERA—Continued

[C indicates cases; D, deaths; P, present]

Place		December, 1929	January, 1930	February, 1930	March, 1930			April, 1930			May, 1930			June, 1930	
					1-10	11-20	21-31	1-10	11-20	21-30	1-10	11-20	21-31	1-10	11-20
Indo-China (French) (see also table above):															
Annam [1]	C	----------	1	4	----------	52	----------	----------	----------	60	----------	20	3	2	14
Cambodia [1]	C	41	147	90	49	32	----------	18	6	----------	5	31	52	56	88
Cochin-China [1]	C	46	177	65	5	22	55	48	----------	----------	188	224	259	147	126

[1] Reports incomplete.

PLAGUE

[C indicates cases; D, deaths; P, present]

Place		Jan. 12–Feb. 8, 1930	Feb. 9–Mar. 8, 1930	Mar. 9–Apr. 5, 1930	Apr. 6–May 3, 1930	Week ended— May, 1930				June, 1930				July, 1930			
						10	17	24	31	7	14	21	28	5	12	19	26
Algeria:																	
Algiers	C														1	2	
Constantine	C									1				1			
Oran	C															2	
Argentina:																	
Andalgala [1]																	
Rosario	C	P															
Santa Fe	C	6															
Villa Lia	D		2														
Azores: Ponta Delgada	C				8												
	D				5												
Belgian Congo	C													2			
	D													2			
Brazil:																	
Rio de Janeiro	C	1															
	D	1															
Sao Paulo [2]																	
British East Africa (see also table below):																	
Tanganyika	C		7		44												
	D				20												
Uganda	C	82	47	98	117	54	89		84	121							
	D	70	43	87	105	48	75		72	75							
Ceylon:																	
Colombo	C	4	3	4	1	4	1		1	1				1	2		
	D	4	3	4	1	3	1		1	1				1	2		
Plague-infected rats		1	3	2	4					1							
Chile: Antofagasta	C	1	1	1	1												
	D			2	1												
Dutch East Indies:																	
Batavia and West Java	C	167	153	124	87	18	33	17	14	19	27						
	D	164	150	122	81	18	33	17	14	19	27						
Plague-infected rats		3	3	3	8			3	2	3	1						
Celebes—Makassar	C	1															
	D	1															
Java and Madura	D	317	296	223	173	28	74	36	48	40							

[1] On Mar. 11, 3 deaths from bubonic plague were reported in Andalgala, Catamarca Province, Argentina, since Feb. 5, 1930.
[2] 21 cases of plague with 8 deaths were reported Jan. 29, 1930, in the State of Sao Paulo, Brazil; 15 of these cases were in the city of Sao Paulo.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

PLAGUE—Continued

[C indicates cases; D, deaths; P, present]

Place		Jan. 12–Feb. 8, 1930	Feb. 9–Mar. 8, 1930	Mar. 9–Apr. 5, 1930	Apr. 6–May 3, 1930	Week ended— May, 1930 10	17	24	31	June, 1930 7	14	21	28	July, 1930 5	12	19	26
Ecuador (see table below).																	
Egypt:																	
Alexandria	C	4	1	4	2	2	3	3	5	3	6	6	4	8	8	3	4
	D	1		1	2			1	2	2		2	5	2	3	2	3
Assiout	C				14	3	9	2	6	4	2	3		1	1		
	D				5		3	1	1		1		2	1	1		
Beheira	C	2		4													
Beni-Suef	C			4													
Dakahlieh	C		8	5	5	3	1	2	5	1							
	D			1			1	1									
Gharbieh	C	1			1												
	D				1												
Girga	C				1										1		
Minieh	C							6	1	1	1	4	4	2	1		
	D								1		1						
Port Said	C				1		1	1		1			1			1	1
France: St. Ouen	C															1	
	D															1	
Greece (see also table below):																	
Patras	C			1								1				1	
Piraeus	C	1															
Pyrgos	C			1													
Hawaii Territory, Hamaqua, Hawaii: Plague-infected rats												1					
India	C	4,814	5,639	4,087	2,215	281	188	117	62	55							
	D	3,308	3,940	3,344	1,960	271	205	103	56	42							
Bassein	C	1		3													
	D	1		1													
Bombay	C	1	1	7	4	4	1		1	1		2					1
	D	1	1	5	8	1	4					1	1				1
Plague-infected rats		28	31	86	108	23	39		19	6	7	8	5	13	14	10	
Madras Presidency	C	27	230	157	44	2		6	30	26	10	2			1		
	D	13	140	87	19		1	4	6	15	2				1		
Rangoon	C	3	7	3	5		1	3				1	1				2
	D	2	6	3	4	1	1	1					1				2
Plague-infected rats		1	7	3	4	1	3	1						2	2		

India (Portuguese)	D					7											
Indo-China (see also table below):																	
Pnompenh	C	1			3	1			2	6					1		
	D	2	13	13	4			1		5	1		1			1	
Saigon and Cholon	C	2		1		1				1		1					
	D	2		1								1					
Iraq: Baghdad	C	6	6	7	6	7	11	7	12	12	4	8	4	10	4	2	2
	D	2	1	4	2	3	5	4	6	7	3	5		5		1	1
Japan: Osaka (vicinity of)—Plague-infected rats		7	6	4	3												
Kwang-Chow-Wan	C	25	25	7	37		20		14	23		8					
Madagascar (see also table below): Tamatave	C				1					1							
Morocco	C	4	48	55	121	19	22	18	12	2		1					
	D		13	18	45	11	14	6	3	4							
Nigeria: Lagos	C	6	7	13		1	1			1		3	1	1			
	D	6	7	5		1	1			1		3	1	1			
Plague-infected rats		44	42	25	7	2	6	5	4	1							
Senegal (see table below).																	
Siam	C	8	17	16	5		1	1	3								
	D	6	13	15	6		1		3								
Bangkok	C		1	5			1	1	3								
	D		1	4			1		3								
Nagara Pathom	C	7	5	1	10												
	D	7	6	1	9												
Nagara Rajsima	C	2	2	1	1												
	D			1	1												
Syria: Beirut	C										2	1	1		2	4	3
Tunisia:																	
Sfax district	C	18	22		1	17			4	6		3					
Tunis	C	6	5	1	4				1		1				1	4	
	D									1					1		
Union of Socialist Soviet Republics:																	
Salsk Region	C									1			1				
	D									1							
Stavropol Region	C									1							
	D									1							
Union of South Africa:																	
Cape Province	C	1	2	1		P				1							
	D		1	1													
Orange Free State	C	15	11	5	1												
	D	9	3	3													
Transvaal	C	8	2	1													
	D	3		1													
On vessel:																	
At Rio de Janeiro, Brazil, from Argentina	C	1															

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

PLAGUE—Continued

[C indicates cases; D, deaths; P, present]

Place		January, 1930	February, 1930	March, 1930	April, 1930	May, 1930	June, 1930
British East Africa (see also table above):							
Kenya	C	34	69	85	16	171	75
Uganda	C	184	109	------	------	------	------
	D	155	90	------	------	------	------
Ecuador: Guayaquil	C	4	2	2	0	------	------
	D	2	2	------	0	------	------
Plague-infected rats		4	2	2	0	------	------
Ecuador (outside of Guayaquil)	C	4	------	------	------	------	------
	D	2	------	------	------	------	------
Greece (see also table above)	C	------	------	------	1	------	1
Indo-China (see also table above)	C	10	30	27	4	------	11
Madagascar (see also table above)	C	282	------	------	------	------	------
	D	258	------	------	------	------	------
Ambositra Province	C	128	49	25	14	------	------
	D	111	41	20	12	------	------
Antisirabe Province	C	26	22	38	46	------	------
	D	25	22	36	45	------	------
Itasy Province	C	31	------	4	------	------	------
	D	31	------	4	------	------	------
Miarinarivo Province	C	------	25	14	1	------	------
	D	------	25	14	1	------	------
Madagascar (see also table above)—Con.							
Moramanga Province	C	22	7	5	3	------	------
	D	21	4	5	3	------	------
Tamatave Province	C	3	------	------	------	------	------
	D	1	------	------	------	------	------
Tananarive Province	C	88	110	52	39	------	------
	D	83	107	52	38	------	------
Senegal:							
Baol [1]	C	------	------	18	24	13	2
	D	------	------	8	12	11	2
Dakar [1]	C	------	------	------	2	52	53
	D	------	------	------	2	42	117
Louga [1]	C	------	2	------	33	54	60
	D	------	------	------	10	27	21
Thies [1]	C	3	------	3	12	21	52
	D	------	------	2	9	8	35
Tivaouane [1]	C	1	------	11	71	135	43
	D	------	------	8	38	69	28

[1] Incomplete reports.

SMALLPOX

[C indicates cases; D, deaths; P, present]

Place		Jan. 12–Feb. 8, 1930	Feb. 9–Mar. 8, 1930	Mar. 9–Apr. 5, 1930	Apr. 6–May 3, 1930	Week ended— May, 1930 10	May 17	May 24	May 31	June, 1930 7	June 14	June 21	June 28	July, 1930 5	July 12	July 19	July 26	Aug. 2, 1930
Algeria:																		
Algiers	C	6	1	5	1		1		2									
Constantine	C	1										1				1		
Oran	C	5		1														
Arabia: Aden	C	1	2	3	1									1				
Bolivia: La Paz.[1]																		
British Borneo: Sarawak	C	4	19															
British East Africa (see also table below):																		
Tanganyika	C	5	49	103	57	33	45	55	276	385	755							
	D		8	7	14	3	5	8	54	154	90							
British South Africa:																		
Northern Rhodesia	C			9	1			57	2									
	D				2			9										
Southern Rhodesia	C	1	6		66	53		42	60	75	1							
	D				1	4		8	1									
Canada:																		
Alberta	C	22	4	10	4										2	1	2	
Edmonton	C	19	1	4	3													
British Columbia—Vancouver	C	16	16	20	17			2	2	1	1			2	2		1	
Manitoba	C	6	2	4	4			7	3			4						
Ontario	C	63	86	100	77	14	24	24	20	14	10	13	10	3	5	6	10	
Fort William	C	4																
North Bay	C	2	1			1												
Ottawa	C	10	11	19	21	3	10	7	5	6		8	1	1	1	4	7	5
Toronto	C	2						3	1	2	1	1			1			
Quebec	C	11											4	3				
Montreal	C	1																7
Saskatchewan	C	86	76	47	41	20	6	10	3		12	10			2		3	
Regina	C					1		3										
Ceylon:																		
Angoda, Western Province	C		10		6													
	D		1		2													
Colombo	C	1	3															
	D		2															

[1] From Jan. 1 to May 31, 1930, 44 deaths from smallpox were reported in La Paz, Bolivia.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

SMALLPOX—Continued

[C indicates cases; D, deaths; P, present]

Place		Jan. 12–Feb. 8, 1930	Feb. 9–Mar. 8, 1930	Mar. 9–Apr. 5, 1930	Apr. 6–May 3, 1930	Week ended— May, 1930 10	May, 1930 17	May, 1930 24	May, 1930 31	June, 1930 7	June, 1930 14	June, 1930 21	June, 1930 28	July, 1930 5	July, 1930 12	July, 1930 19	July, 1930 26	Aug. 2, 1930
China:																		
Canton	C	7	11	6	3					1								
	D	2	3	2	3													
Chungking		P	P		P	P		P	P	P			P					
Foochow		P	P		P		P		P		P		P					
Hong Kong	C	118	62	38	18	5	5	2		2	1	1			2			
	D	109	51	25	23	4	2	3		1		1	1		1			
Manchuria—																		
Harbin	C	3			1		10	10										
Kwantung—Dairen	C	6	5		2	1		7			11	5		8				
	D							4				1						
Nanking	C	P	P	P	P	P			P	P	P							
Shanghai—																		
Foreigners only	C	5	2	2	3		1	1		1	1	1	2	1		1		
Including natives	D	8	7	10	10		1	2	2	1		1	1					
Swatow	D	3	6	6	3	1		1	4	1		1	2	1				
Tientsin	C	1	1	2	2	1												
Chosen (see table below).																		
Colombia:																		
Baranquilla	C		102	2	1													
Buenaventura	C		1		15	2		1	1	1	1		4	4	3			
Costa Rica:																		
Port Limon	C				6				2	2								
San Jose [1]	C			10	7													
Curacao (alastrim)	C			14	2	2					1			2				
Dahomey (see table below).																		
Dutch East Indies:																		
Borneo	C	1		185	90		10	4	2	2	10				2			
	D	1		12	31	1					1							
Java—																		
Batavia and West Java	C	14	14	78	64	1	1	5	5	1	4			3	1	3		
	D	7	7	6	11	1	1	3	2		1			2	1			
East Java and Madura	C				4											1		
Sanggi Islands	C	25	12	5	160	14	12											
	D			1	24	1	4											
Sumatra	C	2		48														
	D			5														

Egypt: Port Said	C	2			1		1								2			
Great Britain:																		
England and Wales	C	1,455	1,530	1,700	1,427	462	324	304	327	237	266	241	182	156	138	126		
Ashton under Lyne	C	4	29	15	18	6	3	4	4			3	4		4	2		
Bradford	C	5	2		3		1		1					1				
Cardiff	C			2	3									2				
Leeds	C	6	11	16	2									1				
London	C	597	699	710	602	222	138	148	129	130	136	125	107	84	52	62		
London and Great Towns	C	1,101	1,156	1,239	1,066	339	250	235	254	197	208	190	158	127	96	102		
	D	2	5	3	3													
Sheffield	C			8	2													
Stoke-on-Trent	C	12	41	122	85	19	9	13	21	3	10	15	4	3	2	1		
Scotland	C									1		3			1			
	D														1			
Hedjaz	C	11																
India	C	26,524	36,036	39,329	34,843	6,533	6,549	5,416	4,337	3,686								
	D	6,186	7,710	9,109	6,983	1,449	1,814	1,196	993	1,065								
Bombay	C	342	638	718	430	52	68	58	40	36	35	23	19	17	15	11		
	D	164	314	431	270	33	49	44	35	27	23	19	10	13	9	9		
Calcutta	C	185	399	361	495	109	70	52	71	46	45	45	25	27	19	13		
	D	130	287	305	403	94	72	40	52	50	37	29	30	17	17	12		
Cochin	C	234	184	291	183	13	8	7	9	4	1	10	1			4		
	D	27	29	35	13	5	1	2		2	1	1						
Karachi	C	30	38	33	30		6	7	1	5		1	1					
	D	9	16	47	17	2		1	1	2		1						
Madras	C	105	159	173	133	24	13	15	20	9	10	8	8	6	10	17		
	D	16	29	36	27	4	5	6		6	3	1		4	1	3		
Moulmein	C	65	143	146	43	27	29	20	13		9	6	6	4	10	3		
	D	18	40	41	7	4	6	5	6		3	3	1	3	4	1		
Negapatam	C		1					1			1		1			1		
Rangoon	C	7	7	10	4	2		3	1	1	5	1	2	2	1	1		
	D	4	2	5		1						1	1					
Tuticorin	C	3						5				1						
Vizagapatam	C	5	9	69	6	3	1	1			1							
	D		1	18	2		3											
India (French):																		
Chandernagor	C	3	11	6	10	6	2	8	8	4	8	5	2		1			
	D		5	2	2	2	4	1				2	1		1			
Karikal	C	3	12	24	19	6	5	1		4	3	1	3	1				
	D	3	8	7	8	2	1			2	2	1	3	1				
Pondicherry Province	C	22	52	21	24	9	13	10	8	4	4	9	6	4	9			
	D	19	40	13	20	7	12	10	7	4	4	9	6	3	9			
India (Portuguese)	C	16	50	38	44	2	27	5	13		3	18	7					
	D		5	2	8		3	1	4		2	2	6					
Indo-China (see also table below):																		
Pnompenh	C					1		1	1							1		
	D	1			2					1						1		
Saigon and Cholon	C	3	4	3	5	1	1		1	1								
	D	3	2	1	5		1		1									

[1] 5 cases of smallpox were reported Apr. 14, 1930, in Costa Rica outside of city of San Jose.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

SMALLPOX—Continued

[C indicates cases; D, deaths; P, present]

Place		Jan. 12–Feb. 8, 1930	Feb. 9–Mar. 8, 1930	Mar. 9–Apr. 5, 1930	Apr. 6–May 3, 1930	Week ended— May, 1930				June, 1930				July, 1930				Aug. 2, 1930
						10	17	24	31	7	14	21	28	5	12	19	26	
Iraq:																		
Baghdad	C	7	3	------	8	1	------	------	------	1	------	------	------	1	------	------	------	------
	D	3	1	------	1	1	------	------	------	------	------	------	------	------	------	------	------	------
Basra	C	------	1	------	1	------	------	------	------	------	------	------	------	------	------	------	------	------
Mossoul Liwa	C	26	12	------	22	13	------	8	------	------	1	------	3	47	20	------	------	------
	D	7	2	------	3	2	------	1	------	------	1	------	------	19	1	------	------	------
Ivory Coast (see table below).																		
Jamaica (alastrim)	C	------	------	------	------	------	------	------	2	------	------	------	------	------	------	------	------	------
Japan: Tokyo	C	------	------	------	1	------	------	------	------	------	------	------	------	------	------	------	------	------
	D	------	------	------	1	------	------	------	------	------	------	------	------	------	------	------	------	------
Macao	D	------	2	3	2	1	------	------	------	------	------	------	------	------	------	------	------	------
Mexico (see also table below):																		
Jalisco (State): Guadalajara	D	9	14	22	20	------	------	6	1	4	------	5	6	3	1	------	------	------
Juarez	C	2	3	2	------	------	------	------	------	------	------	6	------	------	------	------	------	------
	D	1	1	------	------	------	------	------	------	------	------	1	------	------	------	------	------	------
Mexico City and surrounding territory [1]	C	30	38	106	99	30	15	17	18	17	23	20	17	------	------	------	------	------
	D	7	21	31	47	6	12	8	6	5	4	3	5	------	------	------	------	------
Morelos State: [4]																		
Progreso	C	------	------	------	------	------	------	1	------	------	------	------	------	------	------	------	------	------
	D	------	------	------	------	------	------	1	------	------	------	1	------	------	------	------	------	------
San Luis Potosi	C	------	1	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------
	D	------	1	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------
Morocco (see table below).																		
Nigeria (see also table below): Lagos	C	5	2	1	1	------	------	------	------	------	------	------	1	------	------	------	------	------
	D	2	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------
Persia (see table below).																		
Philippine Islands: Sarangani and Balut Islands [4]	D	18	3	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------
Poland	C	------	2	------	7	------	1	------	2	------	------	------	------	------	------	------	------	------
Portugal: Lisbon	C	4	7	7	8	6	------	2	------	1	------	2	7	------	7	------	------	------
Rumania	C	1	1	2	------	------	------	------	------	------	------	------	------	------	------	------	------	------
Siam	C	------	2	------	8	2	------	------	------	------	------	------	------	------	------	------	------	------
	D	1	------	------	4	------	------	------	------	------	------	------	------	------	------	------	------	------
Somaliland, British: Boales	C	35	19	2	------	------	------	------	------	------	------	------	------	------	------	------	------	------
	D	8	2	6	------	------	------	------	------	------	------	------	------	------	------	------	------	------
Spain	C	------	------	------	------	------	------	------	------	------	4	------	8	------	1	------	------	------
Straits Settlements	C	2	------	5	5	1	3	2	5	5	------	1	3	1	2	7	1	------
	D	1	------	1	2	------	1	1	1	1	------	1	------	1	1	1	------	------
Sudan (Anglo-Egyptian)	C	230	79	60	42	------	5	13	1	4	8	1	54	8	1	------	3	------
	D	34	6	5	4	------	------	1	1	------	------	------	3	------	1	------	------	------
Sudan (French) (see table below)																		

Place		December, 1929	January, 1930	February, 1930	March, 1930			April, 1930			May, 1930			June, 1930	
					1-10	11-20	21-31	1-10	11-20	21-30	1-10	11-20	21-31	1-10	11-20
Sudan (French) (see table below).															
Syria (see table below).															
Taiwan: Taihoku (see table below).															
Tunisia: Tunis	C	7	3	3	4		1		1		2				
Turkey (see table below).															
Union of South Africa:															
Cape Province	C	P	P	P	P	P	P	P	P						
Orange Free State	C	P	P	P											
Transvaal	C	P	P	P											
Upper Volta	C		26	2	3				1			5			
Zanzibar	C			13											
On vessel:															
S. S. Tairoa, at Liverpool, from London	C		1												
S. S. Karagola, at Zanzibar, from India	C	4													
S. S. Karagola, at Lourenco Marques, from India	C		1												
S. S. Elysia, at Port Sudan, from Bombay	C				1										
S. S. Naldera, at Port Said	C					1									
S. S. Manoa, from Honolulu to San Francisco	C											1			
Belgian Congo	C	74													
	D	4													
Dahomey	C	19													
Indo-China (see also table above)	C	142	460	434			26	261				173	132	80	133
Ivory Coast	C					7									
Sudan (French)	C	17	229	213		200	409	371		150	40	56	178	76	
	D		25	11		18	31	30		6	7	7	18	18	
Syria: Beirut	C	25	70	18	4	8	5	10	2	7			7	6	1
Taiwan: Taihoku	C			43	31	12	15	10	2						

Place		December, 1929	January, 1930	February, 1930	March, 1930	April, 1930	May, 1930
British East Africa (see also table above):							
Kenya	C	168	12	12	175	174	
Uganda	C		184	109			78
	D		155	99			69
Chosen	C		1	4		5	
	D			1		1	
France	C	9	9	23	8		3
Mexico: Durango (see also table above)	D	4	12	6	5	4	4
Morocco	C	84	29	74		10	18
Nigeria (see also table above)	C	293					
	D	70					
Persia	C	P					
Turkey	C	883	215	114		3	16
	D	457	66	42			

[1] During the month of March, 1930, 100 cases of smallpox were reported in Mexico City, Mexico, and surrounding territory.
[2] Newspaper reports of Feb. 4 show an epidemic of smallpox in Ionacatepec, Morelos State, Mexico, and vicinity, giving 600 deaths in preceding 2 weeks.
[3] On Feb. 1, 1930, 317 cases of smallpox with 102 deaths were reported to that date in the Sarangani and Balut Islands.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

TYPHUS FEVER

[C indicates cases; D, deaths; P, present]

Place		Jan. 12–Feb. 8, 1930	Feb. 9–Mar. 8, 1930	Mar. 9–Apr. 5, 1930	Week ended— April, 1930			May, 1930					June, 1930				July, 1930		
					12	19	26	3	10	17	24	31	7	14	21	28	5	12	19
Algeria:																			
Algiers	C	3	4	6	2	3	2	1	1	2	4	8	2	-----	1	-----	-----	1	2
Constantine Department	C	4	5	11	4	9	2	-----	-----	4	-----	2	11	-----	1	-----	-----	1	1
Oran	C	2	-----	-----	-----	-----	-----	-----	-----	-----	-----	3	-----	-----	-----	4	-----	2	1
Arabia: Aden	C	-----	-----	1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
	D	-----	-----	1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Bolivia: La Paz.[1]																			
Brazil: Porto Alegre	C	-----	2	-----	-----	-----	-----	-----	1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Bulgaria	C	-----	13	9	15	-----	-----	-----	1	-----	5	-----	1	-----	9	6	-----	4	5
	D	-----	1	-----	1	-----	-----	-----	1	-----	1	-----	1	-----	-----	-----	-----	-----	1
Sofia	C	1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Chile:																			
Talcahuano	D	1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Valparaiso	C	1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
China:																			
Manchuria—Harbin	C	-----	1	4	5	-----	20	27	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Shanghai	C	-----	-----	1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Tientsin	C	1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Chosen (see table below).																			
Czechoslovakia (see table below)																			
Egypt:																			
Alexandria	C	-----	-----	-----	-----	-----	1	-----	-----	-----	-----	-----	-----	-----	1	-----	1	-----	-----
Beheira Province	C	14	18	2	-----	-----	2	-----	9	21	9	10	17	16	7	5	-----	5	-----
	D	-----	5	-----	-----	-----	-----	-----	4	4	4	1	1	1	-----	2	-----	1	-----
Cairo	C	-----	1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Port Said	C	2	1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Suez	C	1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Great Britain: Scotland—																			
Dunfermline	C	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	1	-----
Glasgow	C	-----	-----	-----	-----	-----	-----	-----	-----	1	-----	-----	-----	-----	-----	-----	-----	-----	-----
	D	-----	-----	-----	-----	-----	-----	-----	-----	1	-----	-----	-----	-----	-----	-----	-----	-----	-----
Greece (see table below).																			
Iraq: Baghdad Liwa	C	-----	-----	2	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Ireland:																			
Irish Free State—																			
Ballina—Mayo County	C	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	2	-----	1	-----	-----	-----	1	-----
Dingle—Kerry County	C	-----	-----	-----	-----	-----	3	2	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Mohill—Leitrim County	C	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	9	-----	-----	-----
Roscommon—Roscommon County	C	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	1

Roscommon—Roscommon County	C																		
Strokestown—Roscommon County	C																		1
Shillelagh—Wicklow County	C													1		3	1		1
Swinford—Mayo County	C									7	7								
Westport—Mayo County	C																		2
Northern Ireland—Cookstown	C		3																
Latvia (see table below).																			
Lithuania (see table below).																			
Mexico: Mexico City, including municipalities in Federal District	C	12	9	4	2	1		1		2		4	2	3	1	3	2		
	D	4		1	2	1		1				3		1					
Morocco	C	23	21	38	6	5	3	1	3	6	1	1	1		6	8		4	3
	D			7	2	1													
Palestine	C		1	6		1				2			2				3	1	1
Poland	C	296	183	228	59	64	53	67	64	45	34	28	39	15	26	37		24	
	D	21	8	13	4	2	3	6	2	2		1	3	3	2	3		4	
Portugal:																			
Lisbon	C							4											
Oporto	C		1	2	1														
Rumania	C	241	293	185	71	46		69	60	58	61	48							
	D	25	23	12	1	9		1	10	11	6	8							
Spain: Valencia	C													2		1		3	
	D																	1	
Tunisia	C		3						2	2	1	1			2	16			
Turkey (see table below).																			
Union of South Africa:																			
Cape Province	C	P	P	P	P	P			P	P	P	P					P	P	
Natal	C	1	3	P	P	P	P		P	P		P					P	P	
Orange Free State	C	P	P	P					P	P	P	P					P	P	
Transvaal	C				P	P	P												
Yugoslavia (see table below).																			

Place		January, 1930	February, 1930	March, 1930	April, 1930	May, 1930	June, 1930
Chosen: Seoul	C		17		3		
Czechoslovakia	C	10	2	42	29	12	
Greece: Athens	C	12	6	3	1	3	
Latvia	C	18					3
Lithuania	C	2	70	62	73	27	16
	D		5	4	4		
Turkey	C	2	3	1	3	16	2
Yugoslavia	C	26	33	46	22	16	
	D	3	5	2	4	1	6

YELLOW FEVER

Brazil:

	Cases
Mage, on the Leopoldina Railway, between Rio de Janeiro and Nictheroy, Apr. 22, 1930	2
Campos, Rio de Janeiro Province, May 23, 1930	1
Para, June 23, 1930	2
Gold Coast, July 10, 1930	1
Liberia, Monrovia, June 3, 1930	1
Nigeria, Lagos, July 12, 1930 (probably laboratory infection)	1

[1] 12 deaths from typhus fever were reported in La Paz, Bolivia, from Jan. 1 to May 31, 1930.